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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,173	09/24/2003	Boris Ginzburg	P-6065-US	1568

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EXAMINER	
HANNON, CHRISTIAN A	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,173	GINZBURG, BORIS	
	Examiner	Art Unit	
	Christian A. Hannon	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/14/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20 & 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20 & 21 recite the limitation "The wireless communication device of claim 22" in the first line of each of the claims. There is insufficient antecedent basis for this limitation in the claim. It is believed by the examiner that the claims 20 & 21 were meant by applicant to recite "The wireless communication device of claim **19**, as claim 19 recites "A wireless communication device." The examiner is considering these claims on such an assumption.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 7-13, 17, 18 & 22-27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Moutarlier (US 2004/0028072).

Regarding claim 1, Moutarlier teaches a method comprising: adapting a size of a contention window of a collision avoidance mechanism based on an estimated number of active stations of a communication network (Page 1, [0010]; Moutarlier).

Regarding claim 2, Moutarlier teaches the method of claim 1, comprising dynamically modifying the size of said contention window (Page 1, [0010]; Moutarlier).

In regards to claim 3, Moutarlier teaches the method of claim 1, comprising modifying a parameter used in computing the size of said contention window (Page 4, [0049],[0050]: Moutarlier). Moutarlier shows that variables, or parameters, in calculating probabilities of the network usage can be modified to compute the contention window.

Regarding claim 7, Moutarlier teaches the method of claim 3, comprising modifying the size of the contention window in relation to an estimated probability of collisions (Page 3, [0024]; Moutarlier).

With regard to claim 8, Moutarlier teaches the method of claim 1, comprising sending a signal indicating a request for modification of the size of the contention window (Page 3, [0024]; Moutarlier). The examiner is interpreting the request for modification to be the request from the devices 130 & 150 in figure 1 to alter the contention window, or back-off time.

In regard to claim 9, Moutarlier teaches the method of claim 1, comprising modifying a threshold value of a request-to-send mechanism (Page 3, [0024];

Moutarlier). The examiner is interpreting the threshold value to be that of the value associated with the probability of the active terminals on the network, or the request-to-send mechanism.

Regarding claim 10, Moutarlier teaches an apparatus comprising: a processor to adapt a size of a contention window of a collision avoidance mechanism based on an estimated number of active stations of a communication network (Page 2, [0017]; Page 1, [0010]; Moutarlier). It is inherent that a PC has a processor.

In regard to claim 11, Moutarlier teaches the apparatus of claim 10, wherein the apparatus comprises a wireless modem (Figure 1; Moutarlier). It is inherent in a wireless network that wireless modems exists.

Regarding claim 12, Moutarlier teaches the apparatus of claim 10, wherein the apparatus comprises a wireless access point (Figure 1, Item 120; Moutarlier).

With regard to 13, Moutarlier teaches the apparatus of claim 10, wherein the processor is to modify a parameter used in computing the contention window (Page 4, [0049],[0050]: Moutarlier). Moutarlier shows that variables, or parameters, in calculating probabilities of the network usage can be modified to compute the contention window.

In regard to claim 17, Moutarlier teaches the apparatus of claim 10, wherein the processor is to adapt the size of said contention window based on an estimated probability of collisions(Page 3, [0024]; Moutarlier).

Regarding claim 18, Moutarlier teaches the apparatus of claim 10, wherein the processor is to modify a threshold value of a request-to-send mechanism (Page 3,

[0024]; Moutarlier). The examiner is interpreting the threshold value to be that of the value associated with the probability of the active terminals on the network, or the request-to-send mechanism.

Regarding claim 22, Moutarlier teaches a wireless communication system comprising: a station to transmit a signal indicating adaptation of a size of a contention window of a collision avoidance mechanism based on an estimated number of active stations of said wireless communication system (Figure 1, 120; Moutarlier); and a wireless communication device to receive the signal and adapt a size of the contention window (Figure 1, Items 130 & 150; Page 2, [0016]-[0018]; Moutarlier).

In regard to claim 23, Moutarlier teaches the wireless communication system of claim 22, wherein the signal comprises a signal indicating modification of a parameter used in computing the contention window (Page 4, [0049],[0050]: Moutarlier). It is noted that the Moutarlier teachings read on the claim language as communication between devices is inherent to effect Moutalier's art.

With respect to claim 24, Moutarlier teaches the wireless communication system of claim 22, wherein the signal comprises a signal indicating modification of a threshold value of a request-to-send mechanism (Page 3, [0024]; Moutarlier). The examiner is interpreting the threshold value to be that of the value associated with the probability of the active terminals on the network, or the request-to-send mechanism.

Regarding claim 25, Moutarlier teaches a machine-readable medium having stored thereon a set of instructions that; if executed by a machine, cause the machine to perform a method comprising: adapting a size of a contention window of a collision

avoidance mechanism based on an estimated number of active stations of a communication network (Figure 1, Items 120, 130 & 150; Page 2, [0016]-[0018]; Moutarlier).

Regarding claim 26, Moutarlier teaches the machine-readable medium of claim 25, wherein the instructions result in dynamically modifying the size of said contention window(Page 1, [0010]; Moutarlier).

In regards to claim 27, Moutarlier teaches the machine-readable medium of claim 25, wherein the instructions result in modifying a threshold value of a request-to-send mechanism (Page 3, [0024]; Moutarlier). The examiner is interpreting the threshold value to be that of the value associated with the probability of the active terminals on the network, or the request-to-send mechanism.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4-6 & 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moutarlier in view of Liu et al (US 2004/0100936), herein Liu.

Regarding claims 4 & 14, Moutarlier teaches the method and apparatus of claims 3 & 13, however Moutarlier fails to further disclose modifying a parameter indicating a

minimum size of the contention window (CW). Liu does teach modifying a parameter indicating a minimum size of the contention window (Page 5, [0044]-[0045]; Liu). Therefore it would have been obvious to take the teaching of Liu changing the minimum size of the contention window, and incorporating the teaching into Moutarlier, as Moutarlier obviously has a contention window that obviously has a minimum size as Moutarlier is changing the size of the window.

With regard to claims 5 & 15, Moutarlier teaches the method and apparatus of claims 3 & 13, however Moutarlier fails to further disclose modifying a parameter indicating an initial maximum size of the contention window. Liu does teach modifying a parameter indicating an initial maximum size of the contention window (Page 5, [0044]; Liu). Therefore it would have been obvious to take Liu's teaching of an initial maximum size of the contention window and implement the teaching into Moutarlier, since obviously Moutarlier would have to set a first value of the CW in order to accommodate a back off time of non infinite length.

In regard to claims 6 & 16, Moutarlier teaches the method and apparatus of claims 3 & 13, however Moutarlier fails to teach modifying a parameter indicating a non-initial maximum size of the contention window. Liu teaches modifying a parameter indicating a non-initial maximum size of the contention window (Page 6, [0053]; Liu). Therefore it would have been obvious to take the teaching of Liu and implement it in Moutarlier as Moutarlier teaches continual updates thereby obviously requiring a possible non-initial maximum resize as taught by Liu in order to facilitate optimal back off times.

7. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moutarlier in view of Reece et al (US 2005/0261027), herein Reece.

In regards to claim 19 Moutarlier teaches a wireless communication device comprising: a processor to adapt a size of a contention window of a collision avoidance mechanism based on an estimated number of active stations of a communication network (Page 2, [0017]; Page 1, [0010]; Moutarlier). It is obvious that a PC has a processor. However Moutarlier fails to teach that the device has a dipole antenna, Moutarlier does teach a wireless PC card however (Page 2, [0017]; Moutarlier). Reece teaches a wireless PC card having a dipole antenna (Page 2, [0025]; Reece). Therefore it would have been obvious to implement the dipole antenna of Reece's PC card in Moutarlier's PC card in order to establish a cost effective RF radiating means in the PC card.

Regarding claim 20, Moutarlier and Reece teach the wireless communication device of claim 19, furthermore Moutarlier teaches wherein the processor is to dynamically modify a parameter used in computing the contention window (Page 1, [0010]; Moutarlier).

With regard to claim 21, Moutarlier and Reece teach the wireless communication device of claim 19, furthermore Moutarlier teaches wherein the processor is to dynamically modify a threshold value of a request-to-send mechanism (Page 3, [0024]; Moutarlier). The examiner is interpreting the threshold value to be that of the value associated with the probability of the active terminals on the network, or the request-to-send mechanism.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee (US 2004/0004973) discloses a method for performing contention-based access for real-time application and medium access control hierarchy module.

Li (US 2004/0047314) discloses adaptive channel access for carrier sense multiple access based systems.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian A. Hannon
5/11/06

QUOCHIEN B. VUONG
PRIMARY EXAMINER